

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

Pownall, et al.

Group Art Unit: to be assigned

Appln. No.: 10/697,700

Examiner: to be assigned

Filed: October 29, 2003

Commissioner for Patents

Alexandria, VA 22313-1450

PO Box 1450

Title: CANCER TREATMENTS BY METABOLIC MODULATIONS

## TRANSMITTAL LETTER

Certificate of Mailing Under 37 C.F.R. §1.8

I hereby certify that this correspondence along with any paper referred to as being attached is being Mailed to Addressee by service of the United States Postal Service addressed to Commissioner for Patents, P.O. Box, 1450, Alexandria, VA 22312-1450

Date: February 24, 2004

Sachiko Y. Snedden

Sir:

Transmitted herewith for filing are the following:

- 1. Information Disclosure Statement;
- 2. PTO Form 1449;
- 3. Cited References (137); and
- 4. Return Postcard.

No fee is believed to be incurred for filing this Inquiry. However, the Commissioner is hereby authorized to charge any fee that may be due in connection with this and the attached papers, or with this application during its entire pendency to or to credit any overpayment to Deposit Account 50-2212. A duplicate of this Transmittal is enclosed.

Respectfully submitted,

Pillsbury Winthrop LLP

Date: February 24, 2004

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IDS-B 3/02

Atty Dkt No. 029996-0306374 Pat. App. Ser. No. 10/697,700



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CANCER TREATMENTS BY METABOLIC

**MODULATIONS** 

## **INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Sir:

Attached is Form PTO-1449 listing the enclosed cited references in this statement.

Contingent Request Under Rule 97(c): Should a first action on the merits have been issued on the same day or before this Information Disclosure Statement is filed, please accept this Information Disclosure Statement under Rule 97(c) and charge the requisite Rule 17(p) fee to our Deposit Account No. 50-2212, under the above Atty Dkt. No., and proceed to consider this Information Disclosure Statement.

Certificate of Mailing Under 37 C.F.R. §1.8 I hereby certify that this correspondence along with any paper referred to as being attached is being Mailed to Addressee by service of the United States Postal Service addressed to Commissioner for Patents, P.O. Box, 1450, Alexandria, VA 22313-1450

Sachiko V Snedder

Date: February 24, 2004

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This IDS is intended to be in full compliance with the rules, but should the Examiner find any part of its required content to have been omitted, <u>prompt</u> notice to that effect is earnestly solicited, along with additional time under Rule 97(f), to enable Applicant to comply fully.

This Information Disclosure Statement is not to be constructed as a representation that any of the listed citations establishes, by itself or in combination with other information, a prima facie case of unpatentability of any claim in the above-identified patent application. Additionally, this Information Disclosure Statement is not to be constructed as a representation that a further search of the art has been made by the Applicant, or that additional information unknown to the Applicant and relevant to the examination of this patent application does not exist.

Consideration of the foregoing and enclosures plus the return of a copy of the enclosed Form PTO-1449 with the Examiner's initials in the left column per MPEP 609 are earnestly solicited along with an early action on the merits.

Respectfully submitted,

Pillsbury Winthrop LLP

Date: February 24, 2004

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FORM PTO-1449 (modified) Client Ref. Attv. M#..... To: U.S. Department of Commerce Dkt. No. (PW FORM PAT-1449) Patent and Trademark Office 029996-0306374 Applicant: Pownall, et al. INFORMATION DISCLOSURE STATEMENT BY APPLICANT Appln. No.: 10/697,700 Filing Date: October 29, 2003 3 of Date: February 13, 2004 Page 13 Examiner: to be assigned Art Unit: to be assigned Translation OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.) English Readily Abstract Examiner's Available Initials\* Enclosed No Enclosed No Arai et al.; N-Methyl-1-Deoxynojirimycin (MOR-14), an α-Glucosidase ALR Inhibitor, Markedly Reduced Infarct Size in Rabbit Hearts; Circulation; 04/1998; p. 1290-1297 Chishti et al.; Ultrastructural Alterations Produced in Cockerels after Mercuric AMR ChlorideToxicity and Subsequent Interaction with an Organophosphate Insecticide; Archives of Environmental Contamination and Toxicology 22; 1992; p. 445-451 Baek et al.; Acarviosine-simmondsin, a Novel Compound Obtained from ANR Acarviosine-glucose and Simmondsin by Thermus Maltogenic Amylase and Its in vivo Effect on Food Intake and Hyperglycemia; Biosci. Biotechnol. Biochem., 37 (3); 2003; p. 532-539 AOR Balbaa et al.; Inhibition of some hepatic lysosomal glycosidases by ethanolamines and phenyl 6-deoxy-6-(morphlin-4-yl)-β-D-glucopyranoside; Carbohydrate Research 317; 1999; p.100-109 APR Bax et al; The Structure of Phosphorylated GSK-3ß Complexed with a Peptide, FRATtide, that Inhibits β-Catenin Phosphorylation; Structure Vol. 9; 12/2001; p. 1143-1152 Beckerbauer et al.; FR900482 class of anti-tumor drugs coss-links AQR oncoprotein HMG I/Y to DNA in vivo; Chemistry & Biology Vol. 7, No. 10; 2000; p. 805-812 Bergans et al.; Molecular Mode of Inhibition of Glycogenolysis in Rat Liver by ARR the Dihydropyridine Derivative, BAY R3401; Diabates Vol. 49; 09/2000; p.1419-1426 ASR Berger et al.: A High-Capacity Assay for Activators of Glucose Incorporation

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\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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FORM PTO-1449 (modified) Atty. Client Ref. Dkt. No. To: U.S. Department of Commerce (PW FORM PAT-1449) Patent and Trademark Office 029996-0306374 INFORMATION DISCLOSURE STATEMENT Applicant: Pownall, et al. BY APPLICANT Appln. No.: 10/697,700 Filing Date: October 29, 2003 10 of Page 13 Date: February 13, 2004 Examiner: to be assigned Art Unit: to be assigned OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.) English Translation Abstract Readily Examiner's Available Enclosed No Enclosed No Initials\* DKR Mettey et al.; Aloisines, a New Family of CDK/GSK-3 Inhibitors, ASR Study, Crystal Structure in Complex with CDK2, Enzyme Selectivity, and Cellular Effects; Journal of Medical Chemistry Vol. 46, No. 2; 2003; p. 222-236 DLR Mitchell et al.; Ternary Complex Crystal Structure of Glycogen Phosphorylase with the Transition State Analogue Nojirimycin Tetrazole and Phosphate in the T and R States; Biochemistry Vol. 35, No. 23; 1996; p. 7341-7355 DMR Molyneux et al.; 6-Epicastanospermine, a Novel Indolizidine Alkaloid That Inhibits α-Glucosidase; Archives of Biochemistry and Biophysics Vol. 251; No. 2; 12/1986; p. 450-457 DNR Muraoka et al.; Synthesis of a Nitrogen Analogue of Salacinol and Its α-Glucosidase Inhibitory Activity; Chem. Pharm. Bull. Vol. 49, No. 11; 11/2001; p. 1503-1505 Nakai et al.; Adeno-Associated Viral Vector-Mediated Gene Transfer of DOR Human Blood Coagulation Factor IX Into Mouse Liver; Blood, Vol. 91, No. 12; 06/1998; p. 4600-4607 DPR Nakao et al.; Callyspongynic Acid, a Polyacerylenic Acid Which Inhibits α-Glucosidase, from the Marine Sponge Callyspongia truncata; Journal of Natural Products Vol. 65, No. 6; 2002; p. 922-924 DQR Oikonomakos et al.; The design of potential antidiabetic drugs: experimental invenstigation of a number of β-D-glucose analogue inhibitors of glycogen phosphorylase: European Journal of Drug Metabolism and Pharmacokinetics, No. 3; 1994; p. 185-192 Oikonomakos et al.; Binding of N-acetyl-N'-β-D-glucopyranosyl urea and N-DRR benzovl-N'-β-D-glucopyranosyl urea to glycogen phosphorylase b; Eur. J. Biochem. 269; 2002; p. 1684-1696 DSR Oikonomakos et al.; Flavopiridol Inhibits Glycogen Phosphorylase by Binding at the Inhibitor Site: The Journal of Biological Chemistry Vol. 275, No. 44: 11/2000; p. 34566-34573 DTR Oikonomakos et al.: Kinetic and Crystallographic Studies of Glucopyranosylidene Spirothiohydantoin Binding to Glycogen Phosphorylase B; Bioorganic & Medicinal Chemistry 10; 2002; p. 261-268 Examiner Date Considered:

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FORM PTO-1449 (modified) Attv. Client Ref. To: U.S. Department of Commerce Dkt. No. (PW FORM PAT-1449) Patent and Trademark Office 029996-0306374 INFORMATION DISCLOSURE STATEMENT Applicant: Pownall, et al. BY APPLICANT Appin. No.: 10/697,700 Filing Date: October 29, 2003 Page 11 of Date: February 13, 2004 13 Examiner: to be assigned Art Unit: to be assigned Translation OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.) English Examiner's Abstract Readily Available Enclosed No Enclosed No Initials\* DUR Oikonomakos et al.; Allosteric inhibition of glycogen phosphorylase a by the potential antidiabetic drug 3-isopropyl 4-(2-chlorophenyl)-1,4-dihydro-1-ethyl-2-methyl-pyridine-3,5,6-tricarboxylate; Protein Science 8; 1999; p. 1930-1945 DVR Okazaki et al.; A repeated 28-day oral dose toxicity study of genistein in rats. based on the 'Enhanced OECD Test Guideline 407' for screening endocrinedisrupting chemicals; Arch Toxicol 76; 2002; p. 553-559 DWR Papandréou et al.; The α-Glucosidase Inhibitor 1-Deoxynojirimycin Blocks Human Immunodeficiency Virus Envelope Glycoprotein-Mediated Membrane Fusion at the CXCR4 Binding Step; Molecular Pharmacology, Vol. 61, No. 1; 2002; p. 186-193 Pinotsis et al.; The binding of β- and γ-cyclodextrins to glycogen DXR phosphorylase b: Kinetic and crystallographic studies; Protein Science Vol. 12: 2003: p. 1914-1924 DYR Rhinehart et al.; Quantitative Relationship of Lysosomal Glycogen Accumulation to Lysosomal α-Glucosidase Inhibition in Castanospermine-Treated Rats; Biochemical Pharmacology, Vol. 41, No. 2; 1991; p. 223-228 DZR Rusbridge et al.; 3,4-Dichloroisocoumarin, a serine protease inhibitor, inactivates glycogen phosphorylase b; FEBS Letters Vol. 268, No. 1; 07/1990; p. 133-136 EAR Saunier et al; Inhibition of N-linked Complex Oligosaccharide Formation by 1-Deoxynojirimycin, an inhibitor of Processing Gucosidases; The journal of Biological Chemistry Vol. 257, No. 23; 12/1982; p. 14155-14161 **EBR** Rathi et al.; The Effect of Momordica charantia and Mucuna pruriens in Experimental Diabetes and their Effect on Key Metabolic Enzymes Involved in Carbohydrate Metabolism; Phytotherapy Research 16; 2002; p. 236-243 Ring et al.; Selective Glycogen Synthase Kinase 3 Inhibitors Potentiate **ECR** Insulin Activation of Glucose Transport and Utilization in Vitro and in Vivo; Diabetes, Vol. 52; 03/2003; p. 588-595 EDR Roden et al.; Application of NMR Spectroscopy to Study Muscle Glycogen Metabolism in Man; Annu. Rev. Med. 50; 1999; p. 277-290 EER Rousset et al.; Presence and Cell Growth-related Variations of Glycogen in Human colorectal Adenocarcinoma Cell Lines in Culture; Cancer Research

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Client Ref. FORM PTO-1449 (modified) Attv. To: U.S. Department of Commerce Dkt. No. (PW FORM PAT-1449) Patent and Trademark Office 029996-0306374 Applicant: Pownall, et al. INFORMATION DISCLOSURE STATEMENT BY APPLICANT Appln. No.: 10/697,700 Filing Date: October 29, 2003 Page 12 of Date: February 13, 2004 13 Examiner: to be assigned Art Unit: to be assigned Translation OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.) English Abstract Readily Examiner's Available Enclosed No Enclosed No Initials\* **EFR** Ryves et al.; Glycogen Synthase Kinase-3 Inhibition by Lithium and Beryllium Suggests the Presence of Two Magnesium Binding Sites; Biochemical and Biophysical Research Communications Vol. 290, No. 3; 2002; p. 967-972 EGR Ryves et al.; Lithium Inhibits Glycogen Synthase Kinase-3 by Competition for Magnesium; Biochemical and Biophysical Research Communications Vol. 280, No. 3; 2001; p. 720-725 EHR San Juan Serrano et al.; Caffeine Inhibition of Glycogen Phosphorylase from Mytilus galloprovincialis Mantle Tissue; Int. J. Biochem. Cell Biol., Vol. 27, No. 9; 1995; p. 911-916 EIR Scott et al.; Searching for Peptide Ligands with an Epitope Library, Science, Vol. 249; 07/1990; p. 386-390 IEJR Shiota et al.; Inhibition of glycogenolysis enhances gluconeogenic precursor uptake by the liver of conscious dogs; Am. J. Physiol. 273 (Endocrinol. Metab. 36); 1997; p. E868-E879 Smith et al.; 3-Anilono-4-arylmaleimides: Potent and Selective Inhibitors of EKR Glycogen Synthase Kinase-3 (GSK-3); Bioorganic & Medicinal Chemistry Letters 11; 2001; p. 635-639 ELR Sou et al.; α-Glucosidase Inhibitors with a 4,5,6,7-Tetrachlorophthalimide Skeleton Pendanted with a Cycloalkyl or Dicarba-closo-dodecaborane Group; Chem. Pharm. Bull. Vol. 49, No. 6; 06/2001; p. 791-793 Sugita et al.; Inducible nitric oxide synthase plays a role in LPS-induced **EMR** hyperglycemia and insulin resistance; Am. J. Physiol. Endocrinol. Metab. 282; 2002; p. E386-E394 Takeuchi et al.: Inhibitory Effect of Pseudo-Aminosugars on Oligosaccharide ENR Glucosidases I and II and on Lysosomal α-Glucosidase from Rat Liver; J. Biochem. 108; 1990; p. 42-46

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